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"Bridging the gap between increasing knowledge and decreasing resources"

Assessment of On-Farm, Market, and Wild Food Diversity in Three Agro-Ecological Zones of Western Kenya

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Abstract

Assessing food diversity can help to gain deeper knowledge on issues of conservation and use of agrobiodiversity (ABD) for food and nutrition security. Therefore, the objectives of this case study were to assess on-farm, market, and wild food diversity and to collect relevant information about its availability, accessibility and usage. The diversity of food species produced on-farm and collected in nearby wild habitats was recorded for 30 households in six villages. Two villages each were located in the humid upper midlands (UM1), sub-humid lower midlands (LM2), and transitional lower midlands (LM4) of the Western and Nyanza Provinces of Kenya. Additionally, ten surveys on key local markets were carried out during the short rainy season and at the end of the dry season. Tools for data collection included focus-group discussions (two per village; six with women and men each), individual household questionnaires including farm inventories in five households per village, transect walks for documenting wild food species, and market surveys. The highest on-farm mean food species richness was found in UM1 (17.4 species/farm) the lowest in LM4 (8.6) and an intermediate diversity in LM2 (10.2). The total food species number per zone was almost the same for LM2 (34 species in total) and LM4 (35) and was highest in UM1 (49). Although situated close to forest habitats, none of the respondents in UM1 reported collection of wild foods, whereas the majority of respondents in LM4 and LM2 collected fruits and insects from the wild (60 and 90 %, respectively). Initial analyses of the market survey indicate that the number of food items was lower in the dry season but such variations across season had a minor impact on food prices. However, prices as well as number of food items per market differed widely between the different agro-ecological zones for some products (e.g. sweet banana, potato, and fish). Further analysis will be performed to draw seasonal calendars and relate ABD to functional and dietary diversity. The data gathered will provide useful information for combined agricultural and nutritional approaches to promote and inform action for improving ABD levels, community livelihoods and family nutrition.

Keywords: Agro-biodiversity, food diversity, seasonal calendar, species richness

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